

connected with our domestic economy in which glass would be very useful: thus, spoons, dishes, basins, and numerous culinary utensils might be formed of this material.

Yours truly,

B. A.

P.S. I should mention, that for the above, and indeed every other purpose, brittle glass should be *carefully eschewed*.

SINGULAR TRANSIT OF LIGHTNING THROUGH A RANGE OF BUILDINGS.

THE details whence the following particulars are gleaned appeared in the *Manchester Express*, and seem to merit a more general circulation through the press than they appear to have yet attained.

During the occurrence of a storm at Manchester a few weeks since, a very loud peal of thunder broke over the mill of Messrs. Sidebottom, and almost instantly a vivid flash of lightning from the north-east struck the chimney, which stands on the margin of the Etherow, and is 112 feet in height, of a square form, and very strongly built. To the height of 40 feet it is of stone, and two to three feet thick, while the upper part, which is of brick, diminishes in thickness upwards from 18 inches to 9. There was no conducting rod—nothing to break the shock, and the stalk has been most seriously damaged. The top was struck on two sides with such force as to open a chasm two or three yards in extent, and some of the dislodged bricks were projected to the opposite side of the river, a distance of 20 yards. The electric stream, as it descended, made another large cavity a dozen yards from the top, and then descended, without further injury, to the base, on one side of which the solid stonework has been thrust outwards in a very remarkable manner, but, apparently, without making any fissure. Some of the stonework externally, however, has been fractured as if by a battering ram; and it is evident that nothing but the strength of the shaft saved it from almost total prostration. Connected with the chimney, there are four underground flues, and through every one of these the electric current rushed. One is 40 yards in length, and the current was strong enough to burst open the doors of the fire-place, knock down the casings of the ash-pit, and project the fire and smoke into the smithy. Another has its exit through a wooden funnel, reared against the wall, and the current, in rushing through, begimed the face of the wall with soot nearly to the top. In its progress to the chimney, the fluid passed the end of one portion of the mill six stories high, and twenty yards long. It entered at a window on the second story, partly open, and also at one on the fourth story, knocking down two females, and igniting the loose cotton “fly” which adhered to the gas pipes, as well as that in the waste can. Through this mill, in which all the hands (900 in all) were at work, it passed without injuring a single person, and dashed against the warehouse in front of the weaving shed, and 200 yards from the point of entrance. How it entered the warehouse is unknown; for not a pane of glass has been broken, nor has any of the stonework been injured. From the warehouse it seems to have made its way through the weaving shed again, and then to have struck a row of cottages connected with the shed. In one of them the fluid passed between two persons and up the chimney without injuring them.

SIR JOHN RENNIE'S CONVERSATIONS.—The president of the Institution of Civil Engineers gave his second *soirée* on the 5th inst., and the number of visitors was very great. We would suggest to Sir John, in the event of a similar meeting hereafter, that some better arrangement should be made for the recovery of hats and coats than was found on this occasion, when we fought in a dense crowd for five and thirty minutes, and were ultimately but too happy to escape without the object of our search, by means of the kitchen-stairs and the area-gate.

IRISH MARBLE.—A discovery of green-veined Irish marble has been unexpectedly made in quarrying for freestone to repair the Diamond of Raphoe. The quarry opened is said to consist of marble of a superior description.

Correspondence.

DISTRICT SURVEYORS' FEES.

SIR,—With reference to the mode of fixing district surveyors' fees, suggested by L. H. I. in your valuable journal, it must be obvious to all concerned in building operations, that such a regulation would never work well, for this reason, that instead of the poor man reaping the benefit, it would be the builder who could afford to employ a sufficient number of workmen to complete the job within the seven days. Now, supposing a poor builder is employed to build an addition to a fourth-rate house, he not having the means to set on a sufficient number of men, or, perhaps, in consequence of unfavourable weather, or other unforeseen circumstances, during the progress of the building, it might be utterly impossible to complete the addition within the twenty-one days; the result would be that the district surveyor would claim, according to your correspondent's scale, the exorbitant and inconsistent fee of two guineas, whereas, by the present arrangement, he could only claim a fee of ten shillings.

Your correspondent states, that he thinks the district surveyor would only find it necessary to make one survey in jobs which would take but seven days in completing, and that the fee of ten shillings would compensate him for his trouble; but I must beg to differ with him on that point. It would be necessary, in the first place, on the receipt of a notice, to inspect the works, and to cause all the rules and directions of the Act to be strictly observed; and, secondly, to attend on the seventh day for the purpose of seeing if the work was complete and to regulate his fee, which would be, after two surveys at least, the paltry sum of ten shillings.—I remain, Sir, &c.

A CONSTANT READER.

Miscellaneous.

INSTITUTION OF CIVIL ENGINEERS.—June 1st. The paper read was “An account of the iron barque *Josephine*,” of Liverpool, by Captain Masters, who commanded her in the voyages she has made. The subject of iron vessels is one of great importance, and the use of that material in naval architecture has been steadily progressing since it was introduced for sea going vessels by Mr. Manby, in the steamer named after him in 1829, and which was the only vessel that ever conveyed a cargo direct between London and Paris without transshipment. Sanguine hopes had been entertained of introducing iron for vessels of war; but it appears from the partial accounts that have been made public of the results of the experiments at Woolwich, and elsewhere, that the effects of cannon shot on iron vessels is more destructive than upon timber. The paper read was a plain and somewhat dry specification of the construction of the vessel, which will, however, when printed in *extenso* in the minutes of proceedings, be found useful. Iron ships have generally been found to get very foul. The *Josephine* was, however, paid with various compositions as experiments; that which succeeded best was: 1 barrel of varnish, 2½ cwt. of best tallow, 40 lbs. of black lead, 7 lbs. of brimstone, 70 lbs. of arsenic. This being applied hot, the iron having been previously warmed and paid with boiled linseed oil, appeared to have prevented foulness; as after her voyages there was little weed or grass, and scarcely any barnacles, but very slight oxidation took place, and that only where the composition had been rubbed off. They were as much annoyed by rats as in a timber ship, nor could they be destroyed by any of the means adopted.

ALL SAINTS' CHURCH, LAMBETH MARSH.—This church, already described in our pages, was consecrated on Monday last by the Bishop of Winchester. The lofty campanile and spire is about 80 feet from the body of the church, in Lambeth Marsh, at the corner of York-street. The church is calculated to seat 1,500 persons. The architect was Mr. W. Rogers; the land on which the church is built cost 2,400l.; the building 6,512l.; the furnishing (exclusive of the organ, &c. nearly 800l.).

LOOK TO YOUR COIN DEPOSITS.—The “plundering of posterity” by an inverted “Antiquary” (see “Notes”) is not a solitary case it seems, the like having lately been “done” near Stranraer: mere “rubblings” of the “brass” won't satisfy these new Archaeologists.

PROJECTED WORKS.—Tenders have been called for by advertisement for the erection of a battery and buildings near Tilbury Fort; new buildings at the Hackney Union Workhouse; walls and entrances to, and excavation of, the Wet Dock and half-tide basin at Sunderland; Framlingham's Hospital at King's Lynn; coal-stores, with iron roofs, &c., of an area of 12,000 feet, with lay bye adjoining, at Stepney; additions to, and alterations of, the Farnham and Aldershot Workhouses; a stable, byre, and cattle-sheds at Offerton; repairs to roof of Goddenham Church; also for widening, sloughing, and bottoming the Keyingham level drain, Hedon; making a cylindrical sewer of 154 yards in length, at Cambridge; and 2,495 feet of sewer in St. Marlebone; conveying water to Kimbolton Castle with about 4,000 feet of 1½ inch strong lead piping, stop cocks, joints, &c., exchanging old pipes; and for the execution of the whole works on 16 miles and 7½ miles of the Reading, Guildford, and Reigate railway.

THE BILL OF HEALTH.—The metropolis has sent up no less than forty-six petitions, praying to be included in the operation of the bill. Liverpool has presented six petitions in favour of it; Hull six, Newcastle-on-Tyne five, and sixty-six other cities and towns three, two, and one each, making a total of 147 petitions in favour of the bill. Cork has petitioned for its extension to Ireland. “The ancient order of Druids” have shewed an enlightened interest in its favour, and it is expected that the salutary condition of the quorum will occupy much of the attention of a meeting of their delegates at Hull, where, by the way, everybody has in some capacity or other petitioned in favour of Lord Morpeth's bill.—The town-council has petitioned—the guardians of the poor have petitioned—the clergy and ministers of the gospel have petitioned, six hundred physicians, magistrates, merchants, and respectable householders have petitioned—and this week a public meeting, held in the Town-hall, agreed unanimously to petition in favour of the amended bill. Go thou and do likewise may we say to “everybody” in every town requiring thorough cleansing,—and where is the town that can conscientiously say that it is even now either “pure and undefiled,” or “without reproach?”

INCREASE OF TRAVELLERS LEADS TO DIMINUTION OF FARES.—Already we have 10,000 miles of railway made, making, or sanctioned, superseding more or less than 25,000 miles of turnpike roads which exist in England and Wales. As railways have spread, travellers have increased in number, and fares have been diminished. In 1845, the London and Birmingham conveyed more than treble the number of passengers over twice the number of miles, for less than double the amount received in 1839.—Half year ending June, 1839 — passengers, 267,144; miles, 17,391,035; receipts, 270,241l.;—ditto, 1845, passengers, 156,904; miles, 38,732,200; receipts, 447,190l.—*Sidney's Speed in Railways.*

PROVINCIAL ARCHAEOLOGICAL ASSOCIATIONS.—We mentioned last week the meeting of two such societies. We may add, that the Cambrian Archaeological Association will meet in Aberystwith in September, under the presidency of Sir S. R. Glynn, Bart. Papers are in preparation on the following subjects:—The Local Antiquities of Aberystwith; the Roman Remains in Merionethshire and Montgomeryshire; History and Architecture of Strata Florida Abbey; and State of the Druidic Religion in Britain during the residence of the Romans.

ARCHAEOLOGICAL INSTITUTE.—At a meeting of the Institute on Friday, the 4th, Mr. Winston read a very interesting paper on the difference of style observable in ancient painted glass, which was amply illustrated by drawings and specimens of glass. Mr. Winston, if we mistake not, is the author of a work on the subject, recently published by Parker, of Oxford. He evidently understands it well.

MR. WEALE, the architectural publisher, has had a gold medal sent him by the King of the Belgians, as a mark of royal approbation of the service he has rendered by bringing out various works on engineering, both civil and military.

ENLARGING UNIVERSITY COLLEGE HOSPITAL.—On Saturday the erection of the north wing to this hospital was complete at a cost of 5,000l.